PROCESSES AND PROPERTIES INDEX

TERMESZET ES TECHNIKA
NATURE AND ENGINEERING
VOL CX 1951
No 2 Feb.

I. Házsó:
The development of the modern tractor plough .... 100—106

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RAZSO, Imre, dr.

Role of Donat Banki in agricultural engineering. Jarmu mezo gep 6 no.6:161-162 '59.

1. "Jarmuvek-Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr.

The Department of Agricultural Machinery of the Budapest Polytechnical University is 70 years old. Jarmu mezo gep 5 no.3:65-66 My '58.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr., egyetemi tanar

Commemorating the international exhibition of motor plows held in Galanta, 1913. Jarmu mezo gep 10 no.10:393-394 O '63.

L 31351-66

ACC NR: AT6021152 SOURCE CODE: HU/2504/65/050/000/0303/0316

24
B+1

AUTHOR: Razso, I.--Razho, I. (Corresponding member MTA)

ORG: none

TITLE: Study of the mechanized cultivation of drift sand lands

SOURCE: Academia scientiarum hungaricae. Acta technica, v. 50, 1965, 303-316

TOPIC TAGS: agriculture, agronomy, soil type, soil behavior, soil property

ABSTRACT: Approximately 16% of Hungary's agricultural territory consists of sandy areas. The feasibility and techniques of mechanical cultivation for these lands, especially of the approximately 300,000 hectares that are covered by drift sand, were explored. Factors affecting the burrow effect (the phenomenon accompanying the movement of wheels on the land) were discussed and means for its control suggested. Equations were derived to characterize the mechanical behavior of sand drifts, the rolling resistance on a sand-covered soil, the tractive force of a driven wheel, and the effects of wind. The design of wheels free from burrow-effect was discussed. Orig. art. has: 10 figures. [JPRS]

SUB CODE: 02 / SUBM DATE: 31Aug64 / ORIG REF: 001 / OTH REF: 003
SOV REF: 001

Card 1/1

RAZSO, Imre

Arpad Lacsny, 1885-1957; obituary. Jarmu mezo gep 4 no.2: 67 Je '57.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr.

"Farming on slopes" by Kalman Lammel. Reviewed by Imre Razso. Jarmu mezo gep 5 no.5/6:160 '58.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr.

In commemoration of Andras Mechwart, 1834-1907. Jarmu mezo gep 6 no.12:382-384 '59.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr.

Report on the study trip of the Working Group on Agricultural Mechanization of the European Economic Council to the Soviet Union. Jarmu mezo gep 4 no.5:218-220 N '57.

1. "Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

HAZSO, Imre

Role of chemical industrie in plant growing and some of its aspects from the point of view of agricultural machinery. Vesz. [illegible] kozl 4 no.3:255-264 '60

1. Budapesti Muszaki Egyetem Mezogazdasagi Geptani Tanszek.

RAZSO, Imre, dr.

Activity of the Working Group for Mechanization of Agriculture of the European Economic Council in 1954-1957. Jarmu mezo gep 5 no.1:20-21 Mr '58.

1. Europai Gazdasagi Bizottsag Mezogazdasagi Gepesitesi Munkacsoportjanak elnoke az 1954-1956.evekben;"Jarmuvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr., tanszekvezeto egyetemi tanar

Characteristics of the reform curriculum for the training of agricultural mechanical engineers at the Budapest University of Technical Sciences. Jarmu mezo gep 10 no.3:117-118 Mr '63.

1. Budapesti Muszaki Egyetem.

RAZSO, Imre, dr., egyetemi tanar

Survey of grain harvesting systems. Jarmu mezo gep 10 no.1: 32-36 Ja '63.

RAZSO, Imre, dr., egyetemi tanar

The role and significance of electrification in the mechanization of agriculture. Villamossag 8 no.5/6:134-135 My-Je '60.

1. Magyar Tudomanyos Akademia levelezo tagja.

RAZSO, Imre, dr., egyetemi tanar

Agricultural engineering. Jarmu mezo gep 8 no.1:10-11 Ja '61.

1. "Jamruvek - Mezogazdasagi Gepek" szerkeszto bizottsagi tagja.

RAZSO, Imre, dr., egyetemi tanar; FABRY, Gusztav, okleveles gepeszmernok

Bela Liszony, 1899-1962; obituary. Jarmu mezo gep 10 no.1: 40 Ja '63.

RAZSO, Imre, dr., egyetemi tanar

"Research work is usefully supplemented by educational activity"; an interview with Dr. Imre Razso, professor at the Faculty of Agricultural Machinery, Technical University, and corresponding member of the Academy. Ujit lap 14 no.3:11 F '62.

1. Muszaki Egyetem Mezogazdasagi Geptani Tanszeke, Budapest, es a Magyar Tudomanyos Akademia levelezo tagja.

RAZSO, Imre, dr., egyetemi tanar

Agricultural mechanical engineering. Jarmu mezo gep 9 no.1:6-7 Ja '62.

1. Muszaki Egyetem.

RAZSO, I.; SITKEI, G.

Operational conditions of hauling motors during changeable loading. Periodica polytechn eng 4 no.4:349-365 '60. (EEAI 10:6)

1. Lehrstuhl für Landmaschinen, Technische Universität, Budapest.
(Motor vehicles)

[illegible] I.

ARPAD LAC[illegible]SY (1[illegible]5-1957) AN OBITUARY.

p. 67 (JARMUVEK MEZOGAZDASAGI GEPEK) BUDAPEST, HUNGARY VOL 4 NO 2 JUNE 1957

SC: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (AEEI) VOL. 6 NO 11 NOVEMBER 1957

RAZSO, I. : BODOLAI, I.

Combines at the Paris International Exhibition of Agricultural Machines. p. 171. Vol 2, no. 6, June 1955. JARMUVEK MEZOGAZDASAGI GEPEK. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

RAZSO, I

The role of Donat Banki in the field of manufacturing agricultural machinery. Acta techn Hung 27 no.1-2:157-160 '59 (EEAI 9:3)

1. Korresp. Mitgl. der Ung. Akademie der Wissenschaften.
(Hungary - Agricultural machinery) (Banki, Donat)

[illegible], I: [illegible], [illegible]

New HR 60 [illegible] soil [illegible] for improvement of sandy soil. p. 276.
J[illegible] VEK [illegible] G[illegible]I G[illegible]K. Budapest. Vol. 2, no. 9, Sept. 1955.

SOURCE: East European Accessions List ([illegible]), LC, Vol. 5, no. 2. Feb. 1956.

[illegible]
[illegible]
[illegible]

[illegible]
[illegible]

C.A.

7

Analysis of bearing metals. László Rózsa (Magyar Államvasutak Vegyészeti Lab., Budapest, Hung.). *Magyar Kém. Lapja* 3, 37-42(1948).—The various known bearing metals and the methods of analysis are described in detail. (1) Bearing metals with Pb base contg. Ca, Ba, and Na are analyzed as follows: Sn is detd. by the usual iodometric procedure; Sb by Low's $KMnO_4$ method (C.A. 1, 277); and Cu iodometrically. (2) Special Pb alloys contg. Ni, Co, Cd, As, and C are analyzed as follows: Det. Sn and Sb as above. Digest another 1 g. sample with 10 ml. of 11 N HNO_3 and evap. the resulting soln. to dryness. Heat the residue with NH_4NO_3 soln., filter, and wash with the same. Add concd. H_2SO_4 to ppt. the Pb as sulfate and evap. to fumes. Add water + EtOH, filter, and weigh the dried $PbSO_4$. In the filtrate, ppt. the Cu as CuS, filter, and finish the detn. by electrolysis of the HNO_3 soln. of the ppt. In the filtrate from the CuS ppt. deposit the Cd as sulfide at a suitable pH and finally det. as $CdSO_4$. Next det. the Ni with dimethylglyoxime. Det. Zn is another portion of the alloy electrolytically after removing the interfering elements. Many details are given and the detn. of other constituents by conventional methods is explained. István Finály [illegible], A.

"New technology and investments in the construction industry."

p. 6 (Stroitelstvo, Vol. 4, no. 10, 1957, Sofiia, Bulgaria.)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 6, June 1958.

RAZSOLKOV, A.

RAZSOLKOV, A. Concentration of capital investment in construction. p.26. Vol. 3, no. 3/4, 1956, STROITELSTVO, SOFIYA, BULGARIA.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, no. 10, Oct. 1956.

COUNTRY : BULGARIA
CATEGORY : Cultivated Plants. Cereals.

ABS. JOUR. : RZhBiol., No.23, 1958, No.104598

AUTHOR : Stefanov, [illegible]., Razsolkova, Ye., Tsikova, Ye.
INST. : –
TITLE : Results of Some Studies on Determination of the Influence of Pre-Sowing Soaking of Seeds on Their Germination.

ORIG. PUB. : Izv. In-ta za gorat. B"lg. AN, 1957, 2, 245-307

ABSTRACT : A delay in germination has been observed with the treatment of corn seeds by means of pre-planting soaking in 3% solution of KBr for 3 hours and those of rice for 48 hours. With soaking in a weak solution of KBr, the delay in germination is considerably less, the process runs its course almost identically as with the pre-planting soaking in distilled water. With the prolonged soaking of rice seeds for 7 days in 3 and 10% solution of NaCl and 3% KBr, a retarded germination has been observed. With such comparatively long process of soaking the seeds, sugar, proteins

Card: 1/2

COUNTRY :
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1958, No.104597

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : rye, the greatest content of N was found in the grains in the middle part of the spike. In corn, a somewhat different regularity was found, namely: the smallest amount of N was contained in the grains in the upper part of the ear; the percentage content of N hardly varies along the length of the ear. — Ye. I. Saks

Card: 2/2

BULGARIA/Cultivated Plants - Medicinal. Essential Oil Bearing. M-10
Poisonous.

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39554

Author : Stefanov, B., Razsolkova, Ye.

Inst : Bulgarian AS.

Title : Vegetative Propagation by Way of Stalk Implanting.

Orig Pub : Izv. In-ta za gorata, Bulg. AN, 1957, 2, 345-362.

Abstract : A new method of propagation of the kazanlyk rose by means of stalks is described. In this method the stalks are put in the soil horozontally like seeds. The new method gives 100% results in stalk implantation. This considerably reduces expenses and labor. New experiments with other woody and shrub plants are proposed. -- L.I. Lipayeva.

Card 1/1

L 10971-67

ACC NR: AT6036588

the resistance of the organism to motion sickness can be built up by repeated exposure to its causative mechanisms (training).

The investigation by the authors led to the establishment of the following: 1) the existence of a phase in the development of motion sickness; 2) a functional fluctuation, the amplitude of which changes as a function of the developmental phase of this condition; 3) an additional mechanism of motion sickness (disrupted systemic function); 4) the development of rocking illusions accompanied by compensatory motor reactions; 5) peculiarities of the course of motion sickness at altitudes of 2000, 3000, 4000, and 5000 m ("elevation" in a pressure chamber); 6) shifts in the excitability and lability of the visual analyzer in the latent form of motion sickness; 7) shifts in atrioventricular conductivity during various phases of motion sickness; 8) the influence of dibasol on the course of the latent form of motion sickness; 9) the inhibition of lifting reflexes (according to EMG data) during the prolonged, standard oscillation of experimental animals and the development of these reactions when the oscillation regimen is altered; and finally, the prospect of applying motion sickness to the discovery of functional insufficiencies, e.g., using conditioned reflex models of motion sickness to reveal statokinetic defects in human subjects. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2

ACC NR: AT6036624

SOURCE CODE: UR/0000/66/000/000/0319/0321

AUTHOR: Razsolov, N. A.

ORG: none

TITLE: Results of an experimental investigation of air sickness [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24-27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 319-321

TOPIC TAGS: biologic acceleration effect, coriolis acceleration, motion sickness, vestibular analyzer, diagnostic medicine

ABSTRACT:

During motion sickness, wavelike shifts in organic function occur. These changes or fluctuations assume a universal nature. The amplitude of fluctuation increases as a function of the development of motion sickness. During airsickness, the amplitude of fluctuation is more pronounced than during motion sickness under ordinary conditions.

Card 1/4

ACC NR: AT6036624

When motion sickness is modeled using a method of rotation in two planes, rocking illusions develop. This sensory component of the reaction of the organism is accompanied by motor reaction (counteraction of rocking illusion) in manv cases.

Rotation in two planes under normal conditions causes disrupted differentiation to second and first signal (proprioceptive) conditioned stimuli, disrupted spatial orientation in the form of counterrotational and rocking illusions, and wave-like changes in the autonomic reaction component of the organism (gas exchange, respiration rate, body temperature, pulse rate, atrioventricular conductivity of cardiac excitation, systolic, diastolic, pulse, mean dynamic arterial pressure, sugar concentration, cholesterol, blood serum, and other functional indices).

During motion sickness at altitudes of 2000 and 3000 m, inadequate intensification of sensory and autonomic components of the reactions and progressive disruption of differentiation are observed to second and first signal (proprioceptive) conditioned stimuli, especially in statokinetically unstable individuals. At altitudes of 4000 and 5000 m, an even greater inadequacy in the intensification of sensory and autonomic reaction components and a more pronounced disruption of differentiation are observed to second and

ACC NR: AT6036624

first signal stimuli.

Flight status personnel are known to have suffered air sickness to a lesser degree than subjects in other nontransport professions. Among these personnel, work capacity is maintained at a sufficiently high level despite the development of autonomic symptoms of motion sickness. In many cases the latent form of motion sickness becomes overt in flight personnel at 5000 m, and at 2000—4000 m for other individuals in nontransport professions.

In the interest of preventing and treating airsickness, supplementary oxygen along with other pharmacological and hygienic measures is recommended for altitudes above 2000 m for people with lowered statokinetic stability. It is also fully expedient to increase cabin barometric pressure to a value greater than 596 mm HG (altitude less than 2000 m) in aircraft with hermetic cabins.

Statokinetic resistance is sharply lowered when subjects are denied food for 15—17 hr, confirming the data of other authors on the significance of food intake in the prophylaxis of motion sickness.

ACC NR: AT6036624

Five exposures to rotation in two planes is sufficient to cause the absolute development of latent and overt forms of motion sickness in all subjects. During each rotation, the head of the subject is exposed to an absolute acceleration which changes in value from 0.05 to 1.0 (equals 1.05 to 2.0 G) through 180°. The use of this method expands experimental means of studying motion sickness and permits running tests in a pressure chamber. This method of rotation can be used for the rapid diagnosis of statokinetic resistance.

Modeling motion sickness by means of rotation in two planes under normal conditions or in a pressure chamber can be used as a method of specialized functional diagnosis for revealing partial insufficiency of individual physiological systems (cardiovascular, respiratory, and other systems).

[W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 4/4

BR

ACCESSION NR: AT4042710 S/0000/63/000/000/0418/0422

AUTHOR: Razsolov, N. A.

TITLE: The effect of hypoxia on motion sickness

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 418-422

TOPIC TAGS: hypoxia, motion sickness, man, rocking, rotation/Barani chair

ABSTRACT: In order to test the effects of hypoxia on motion sickness, five persons were subjected to rotation in three planes and rocking on a swing with 4 degrees of freedom. The rocking was performed on a Barani chair at the rate of one turn every 2 sec. In the course of 30 turns, the head and body were tipped forward to a horizontal position and restored again to a vertical one 15 times. Five such 30-turn runs were made. After each run, the pulse rate and arterial blood pressure were measured, and the subject was requested to perform assigned motor response tasks. Three types of

Card 1/3

ACCESSION NR: AT4042710

controls were used. In the first control, subjects remained in the pressure chamber without being subjected to hypoxia or to rotation. In the second type of control, they were subjected to rocking in the pressure chamber at sea-level altitude pressure. In the third type of control, they were subjected to a simulated altitude of 4000 meters. In the experiment itself, they were subjected to rocking at a simulated altitude of 4000 meters. Rocking by means of double rotation makes it possible to induce a concealed type of motion sickness in statokinetically stable persons and to induce an overt form of motion sickness in less stable persons. When rocking was accompanied by hypoxia, vegetative reactions were more pronounced. Higher nervous activity is disrupted in both concealed and overt forms of motion sickness. This is apparently due to a weakening of internal cortical inhibition, as a result of which the quality of performing the assigned task declines. Hypoxia, equivalent to a 4000-meter altitude, apparently also brings about a weakening of internal inhibition, which also leads to a decline in the quality of carrying out the assigned task. When rocking is accompanied by hypoxia, a cumulative and still greater disruption of higher nervous activity is observed.

Card 2/3

ACCESSION NR: AT4042710

ASSOCIATION: none

SUBMITTED: 27Sep63

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: LS

Card 3/3

RASOKH[illegible], N.A.

Report on the activities of the All-Union Society of Soil Scientists for 1963. Pochvovedenie no.5:109-118 My '64. (MIRA 17:9) [illegible], I

"Aleko, Gorna Oryakhovitsa, 220 kv. electric-transmission line."

p. 7 (Elektroenergiia, Vol. 9, no. 2, 1958, Sofiia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9,
September 1958

[illegible], I.

[illegible], I. [illegible] 17.
[illegible] Vol. 6, no. 5, [illegible].

SO: Monthly List of East European Accessions, (EEAI), LC, Vol. [illegible],
no. [illegible], [illegible]. Uncl.

RAZSHKANOV, I.

Problems in grounding installations. p. 17.
ELEKTROENERGIIA, Sofiya, Vol. 6, no. 5, May 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

RAZSUKANOV, K.

Utilization of Elprom automatic three-pole switch oil. p. 15.
ELEKTROENERGIIA, Sofiya, Vol. 6, no. 4, Feb. 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

L 1199-66

ACCESSION NR: AP5025842 RU/0004/65/000/003/0104/0105

9

AUTHOR: Razu, Alexandru (Chief planning engineer)

TITLE: Distribution of electric power in industrial plants by means of block transformer station

SOURCE: Electrotehnica, no. 3, 1965, 104-105

TOPIC TAGS: electric power engineering, electric power transmission, electric distribution equipment

ABSTRACT: A brief survey for the working engineer covering the design of a typical block transformer station, a comparison of the two possible distribution systems, and a short reference to uses of such stations. Orig. art. has: 3 tables.

ASSOCIATION: ICPE

SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NR REF SOV: 000 OTHER: 002 JPRS

mlb

Card 1/1

RAZU, R.M., inzh.

Automatic control of the filtration rate in water-purification stations. Mekh. i avtom.proizv. 19 no.2:15-18 F '65. (MIRA 18:3)

RAZU, Rafail Markovich; VRONSKIY, L.N., ved. red.; STAROSTINA,
[redacted] red.

[Automation of the purification of petroleum refinery waste waters] Avtomatizatsiia ochistki stochnykh vod neftepererabatyvaiushchikh zavodov. Moskva, Gostoptekhizdat, 1963. 112 p. (MIRA 16:9)

(Petroleum waste--Purification)

RAZUBAYEV, Ye.I.

PHASE I BOOK EXPLOITATION SOV/5559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

Savitskiy, V.G., and K.V. Popov. Study of Certain Problems of the Temperature Dependence of the Plasticity of Steel From the Viewpoint of the Dislocation Theory 150

Gruzin, P.L., L.V. Pavlinov, A.D. Tyutyunnik (Deceased), and G.B. Fedorov Self-Diffusion in Chromium and Molybdenum 155

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Medovar, B.I., and A.N. Safonnikov. Metallurgical Problems in Electroslag Welding of Heat-Resisting Austenitic Steels and Nickel-Chromium-Base Alloys 220

Paton B.Ye., B.I. Medovarand Yu.V.Latash. Improvement of Quality and Workability of Alloyed Steels and Alloys by Means of Electroslag Remelting in Water-Cooled Metal Molds 228

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Rastegayev, M.V., and A.N. Danil'chenko. Specific Deformation Work [per Unit of Volume] of Certain Alloys 255

Kozlov, A.T., and A.M. Samarin. Mechanical Properties of Deformed Chromium 260

Korneyev, N.I., I.G. Skugarev, S.B. Peyzner, and Ye.I. Razubayev. Thermomechanical Regime of Forming High-Melting Molybdenum-Base and Chromium-Base Alloys 263

RAZUGAYEV, G.A.; MORYGANOV, B.N.

Initiating the reaction between carbon tetrachloride and isopropyl alcohol by benzoyl peroxide. Soob.o nauch.rab.chl.VKHO no.1:4-6 '54. (MIRA 10:10)

(Carbon Tetrachloride) (Isopropyl alcohol) (Benzoyl peroxide) [illegible], [illegible].

[illegible], [illegible]. Utilization of [illegible] automatic [illegible] [illegible]. [illegible] [illegible] IIA. [illegible]. Vol. [illegible], no. [illegible], [illegible]. [illegible].

SO: Monthly List of the East European Accessions. (EEAL), LC. Vol. 4, no. 10, Oct. 1955. Uncl.

MOROZOV, S.T.; BUKHANOV, V.F., redaktor; DOLGOPOLOV, I.V.; RAZUKIN, Ye.V., redaktor; RAZGULYAYEVA, N.G., tekhnicheskiy redaktor.

[In the center of the Arctic] V tsentre arktiki. Fotografii IA. Riumkina. Moskva, Izd-vo Pravda, 1955. 81 p. (MLRA 8:11)
(Arctic regions)

S-4

USSR/Human and Animal Morphology (Normal and Pathological) Lymph
System

Abs Jour : Ref Zhur - Biol., No 12, 1958, No 55132

Author : Razulev Kh.Kh.
Inst : Samarkand Institute of Medicine
Title : Methods of Injecting the Lymphatic System of the Posterior
Human Lung Area.

Orig Pub : Sb. tr. Samarkandsk. med. in-t, 1956, 6, 235-239

Abstract : The lungs of newborn babies, child and adult corpses were filled with injecting substances according to the methods of Steganis-Gerot (ether-chlorofan substance) and Dobroserdov (Mercurial amalgan substance). Best results are achieved on adults, when the direct method is combined with the method of injecting into the lymphatic nods. The Stefanis-Gerot method is the better of the two, but it has the disadvantage that with it it is impossible to use roentgenography. As compared with other lung sections, the lymphatic system of the human posterior lung section is less distinct and there-

Card : 1/2

RAZULEVICH, M.I., inzh.

IU16 photoelectric luxmeter. Prom. energ. 13 no.3:8-10 Mr '58.
(Photometers) (MIRA 11:2)

RAZULEVICH, M.I.

94-3-4/26

AUTHOR: Razulevich, M.I., Engineer.

TITLE: A Photo-electric Lux Meter Type Yu16
(Fotoeletricheskiy lyuksmetr tipa Yu16)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.3, pp. 8 - 10 (USSR)

ABSTRACT: The usefulness of photo-electric light meters is first explained. The Leningrad instrument works "Vibrator" has developed and introduced the first model to be mass-produced in the USSR. It is a portable photo-electric light meter, type Ю16, with separate selenium photo-cell and removable absorber, as shown in Fig.1. The instrument, calibrated directly in lux, is primarily intended for measuring illumination from incandescent lamps and must be specially calibrated for use with fluorescent lamps or natural light. It has three main scales, 25 - 100 - 500 lux; three additional scales, 2 500 - 10 000 - 50 000 lux are obtained by use of the absorber. The principal error on the main scales does not exceed ± 10% and on the additional scales ± 15%. The principle of operation is explained; the construction is described with a drawing of the meter movement in Fig.2; and the circuit is given in Fig.3. The weight of the meter is 0.8 kg or, with case, 1.5 kg. There are 3 figures.

AVAILABLE: Library of Congress

Card 1/1

RAZUM, J.

RAZUM, J.; KRAUS, F. "Waste lime barbide, a cheap raw material for production of hyperchloride of calcium in wood-pulp factories." p. 210. (Papir A Celulosa. Vol. 8, no. 10, Dec. 1953. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Congress, June 1954. Uncl.

RAZUMENKO, Aleksey Venediktovich; AZARNOV, Iosif Davidovich; BOROVIK,
F.V., kand.ekonom.nauk, nauchnyy red.; SHEVLAK, V.A., red.;
VOROTYNSKAYA, S.A., tekhred.

[Commerce in the White Russian S.S.R. during the seven-year plan] Torgovlia v Belorusskoi SSR v semiletke. Minsk, 1960. 23 p. (Obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii Belorusskoi SSR, no.3). (MIRA 13:6)

(White Russia--Commerce)

MALININ, Sergey Nikolayevih; IPPA, Maksim Moiseyevich; RAZUMENKO, Aleksey Venediktovich; MOTUZ, K., red.

[Economy of White Russia at the present-day stage] Narodnoe khoziaistvo Belorussii na sovremennom etape. Minsk, Belarus', 1964. 156 p. (MIRA 17:12)

(3)

L 46010-66 EWT(1) GW

ACC NR: AR6029454 SOURCE CODE: UR/0169/66/000/005/D017/D017

AUTHOR: Andreyeva, R. I.; Gdalevskaya, Ts. M.; Lositskaya, Ye. P.; Sokolova, N. T.; Klitochenko, T. I.; Marchenko, A. P.; Razumenko, G. F.; Chayka, V. G.

TITLE: Compilation of composite seismic maps of the southeastern part of the Dnepr-Donets basin

SOURCE: Ref. zh. Geofizika, Abs. 5D115

REF SOURCE: Tr. Ukr. n.-i. geologorazved. in-t, vyp. 14, 1965, 132-139

TOPIC TAGS: Dnepr basin seismic map, Donets basin seismic map

ABSTRACT: A second interpretation is made of seismic data obtained for the southeastern part of the Dnepr-Donets basin, using supplementary data obtained in drillings. Structural maps to the scale of 1:50,000 and 1:100,000 are plotted for four horizons, from the Cenomanian to the Lower Permian. Iso-pachous line maps, plotted on the basis of data obtained in seismic exploration, are also discussed. A detailed analysis is made of the tectonic structure of the Upper Paleozoic, Mesozoic, and Cenozoic stages on the basis of the above-mentioned

UDC: 550.834

Card 1/2

L 46010-66

ACC NR: AR6029454

maps. A regional subdivision is made of the territory from the point of view of natural gas and petroleum deposits. A. Titkov. [Translation of abstract] [SP]

SUB CODE: 08/

Card 2/2

IOFFE, V.A.; LEONOV, A.I.; RAZUMEYENKO, M.V.

Study of the dielectric constant and loss in certain $CeAlO_3$-base solid solutions. Fiz. tver. tela 6 no.8:2314-2321 Ag '64.

Nonlinear characteristics of cerium aluminate. Ibid.:2405-2410
(MIRA 17:11)

1. Institut khimii silikatov imeni Grebenshchikova AN SSSR, Leningrad.

BRANDT, N.B.; RAZUMEYENKO, M.V.

Effect of impurities on the energy spectrum of electrons in bismuth.
Zhur. eksp. i teor. fiz. 39 no.2:276-284 Ag '60. (MIRA 13:9)

1. Moskovskiy gosudarstvennyy universitet.
(Electrons) (Bismuth--Spectra)

83175

The Problem of the Effect of Impurities on the Energy Spectrum of Electrons in Bismuth

S/056/60/039/002/012/044
B006/B056

the trigonal axis and $\vec{H}$). Fig. 2 shows the angular dependence of the oscillation frequency $E_0/\beta_i \sim S_m$ for pure Bi and Bi with 0.03% Pb. The solid curves were calculated from a formula by Landau. As may be seen from these diagrams, the angle of rotation of the ellipsoids of the Fermi surfaces round the binary axes is practically independent of an increase of the lead concentration to 0.03 wt%. (E_0 denotes the Fermi energy, β_i - the effective mass function, and S_m - the extreme faces of intersection of the Fermi surface with the planes perpendicular to $\vec{H}$). $\Delta S_m/S_m$ as a function of the lead concentration is shown in Fig. 3. The oscillation amplitude rapidly decreases with growing lead concentration; the greatest amplitude decrease could be observed in the high-frequency range at angles near $\psi = 0$. This fact made it difficult to analyze the data obtained at lead concentrations of more than 0.04 wt%. The results obtained by the investigations are discussed in detail according to the individual effects. 1) The change in the shape of the Fermi surfaces for electrons. This shape is found to be nearly independent of the lead content up to concentrations of 0.035% Pb. 2) Change in the Fermi energy

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83175

The Problem of the Effect of Impurities on the Energy Spectrum of Electrons in Bismuth

S/056/60/039/002/012/044
B006/B056

of electrons. Fig. 4 shows $\Delta E_0/E_0$ as a function of the lead concentration C. E_0 decreases nonlinearly with increasing C. 3) Changes in the electron concentration n^e. Fig. 5 shows $n^e(C)$. n^e decreases practically linearly with increasing C. 4) Changes in the effective mass. Up to Pb-concentrations of 0.037%, the effective electron mass practically does not change. 5) Changes of the constant part of the anisotropy of magnetic susceptibility. $\Delta\chi^e(C)$ shows, according to experiments, an increase with increasing C; theoretically, however, a decrease occurs (cf. curves 1 and 2 in Fig. 6). This shows that the change in the anisotropy of the magnetic susceptibility of Bi occurring with C cannot be explained by changes in the electron- and hole-parameters. It may, on the other hand, be satisfactorily explained by Adam's theory (Ref. 3), who assumes that the bismuth valency band is strongly diamagnetic (cf. also Heine, Ref. 2). The authors finally thank A. I. Shal'nikov for his interest, M. I. Kaganov for discussions, and G. A. Kytin for his assistance in the experiments. There are 7 figures and 11 references: 5 Soviet, 4 British, and 2 US.

4

Card 3/4

The Problem of the Effect of Impurities on the Energy Spectrum of Electrons in Bismuth

83175
S/056/60/039/002/012/044
B006/B056

4

ASSOCIATION: Moskovskiy gosudarstvennyy universitet (Moscow State University)

SUBMITTED: March 31, 1960

Card 4/4

ACCESSION NR: AP4043361 S/0181/64/006/008/2405/2410

AUTHOR: Ioffe, V. A.; Leonov, A. I.; Razumeyenko, M. V.

TITLE: Nonlinear properties of cerium aluminate

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2405-2410

TOPIC TAGS: cerium alloy, aluminate, dielectric constant, polarization, ferroelectricity, hysteresis

ABSTRACT: This is a continuation of earlier work by some of the authors (FTT, v. 4, 1778, 1962 and v. 6, 2314, 1964) on the high dielectric constant of some samples of $CeAlO_3$ and on the complicated nature of the processes of polarization and absorption in solid solutions on its basis. To this end, the authors investigated the dielectric hysteresis loops, the dependence of the reversible dielectric constant on the bias field intensity, and the electric conductivity in weak and strong fields, using samples of $CeAlO_3$ and

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ACCESSION NR: AP4043361

some solid solutions on its basis. The dielectric hysteresis loops were investigated with apparatus similar to that of Sawyer and Tower. The oscillograms were photographed and calculated using a conventional procedure. Samples with low dielectric constant and ordinary temperature dependence of the components of the dielectric constant displayed no hysteresis. Samples with anomalous properties, such as those described by the authors earlier, did show hysteresis loops which increased with increasing field intensity and became more rectangular. Attempts to compensate for the hysteresis loop were unsuccessful, and the polarization did not reach saturation up to breakdown values of the field. No change in the dielectric constant was observed after application of a bias field. The electric conductivity of the samples was shown to have an exponential dependence on the field intensity. The hysteresis loops are shown to be due to nonlinear relationship between the electric conductivity and the field intensity, rather than to ferroelectric properties of $CeAlO_3$. Orig. art. has: 6 figures.

Card 2/3

ACCESSION NR: AP4043361

ASSOCIATION: Institut khimii silikatov AN SSSR, Leningrad (Institute of Chemistry of Silicates, AN SSSR)

SUBMITTED: 27Feb64

ENCL: 00

SUB CODE: SS

NR REF SOV: 002

OTHER: 010

Card 3/3

ACCESSION NR: AP4043347 S/0181/64/006/008/2314/2321

AUTHORS: Ioffe, V. A.; Leonov, A. I.; Razumeyenk, M. V.

TITLE: Investigation of the dielectric constant and losses in some solid solutions based on cerium aluminate

SOURCE: Fizika tverdogo tela, v. 6, no. 8, 1964, 2314-2321

TOPIC TAGS: cerium alloy, aluminate, rare earth compound, dielectric constant, dielectric loss, solid solution, frequency shift, temperature dependence

ABSTRACT: This is a continuation of earlier work (FTT, v. 4, 1777, 1962) and is aimed at further explanation of the causes of the high dielectric constant of $CeAlO_3$ and the anomalous temperature dependence of its dispersion. To this end, the complex dielectric constant of aluminates of rare-earth elements with perovskite

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ACCESSION NR: AP4043347

structure and of a few solid solutions based on cerium aluminate were measured. Some samples exhibited an anomalous shift of the maximum of the imaginary part of the dielectric constant with change in temperature. The following conclusions are drawn: 1. Aluminates of rare-earth elements with perovskite structure, whose rare-earth ions are stable in the trivalent state, have a frequency-independent dielectric constant like all ionic crystals. 2. Praseodymium aluminate has a higher dielectric constant, which is probably due to the tendency of the praseodymium ion to assume a tetravalent state. Cerium aluminate with up to 0.1% of samarium aluminate or europium aluminate added has a low frequency-independent dielectric constant, probably because the Sm and Eu ions, which have a tendency to assume a divalent state, trap the electrons from the Ce^{3+} and inhibit the formation of defects that cause the high dielectric constant of $CeAlO_3$. The anomalous shift of the frequency maximum of the complex component of the dielectric constant with change in

ACCESSION NR: AP4043347

temperature, observed in $CeAlO_3$ and some solid solutions on its base, cannot be likened to any of the polarization and loss properties considered normally in the theory of dielectrics. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova AN SSSR Leningrad (Institute of Chemistry of Silicates, AN SSSR)

SUBMITTED: 12Feb64 ENCL: 00

SUB CODE: IC, EM NR REF SOV: 001 OTHER: 002

Card 3/3

KAZUMEYENKO, T. V

USSR / General Problems of Pathology. Allergy. U

Abs Jour: Ref Zhur-Biol., No 11, 1958, 51513.

Author : Medinskiy, G. M., Razumeenko, T. V.
Inst : Not given.
Title : Allergic Manifestations in Man Produced by Inoculation of Live Plague Vaccine.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii, 1957, No 7, 136.

Abstract: Two days following vaccination with live plague vaccine, the vaccinated patient developed malaise, articular pains and an elevation of temperature to 39.4°C. Antibiotic therapy failed to improve the condition. Anti-allergic therapy, begun on the 7th day, caused marked improvement.

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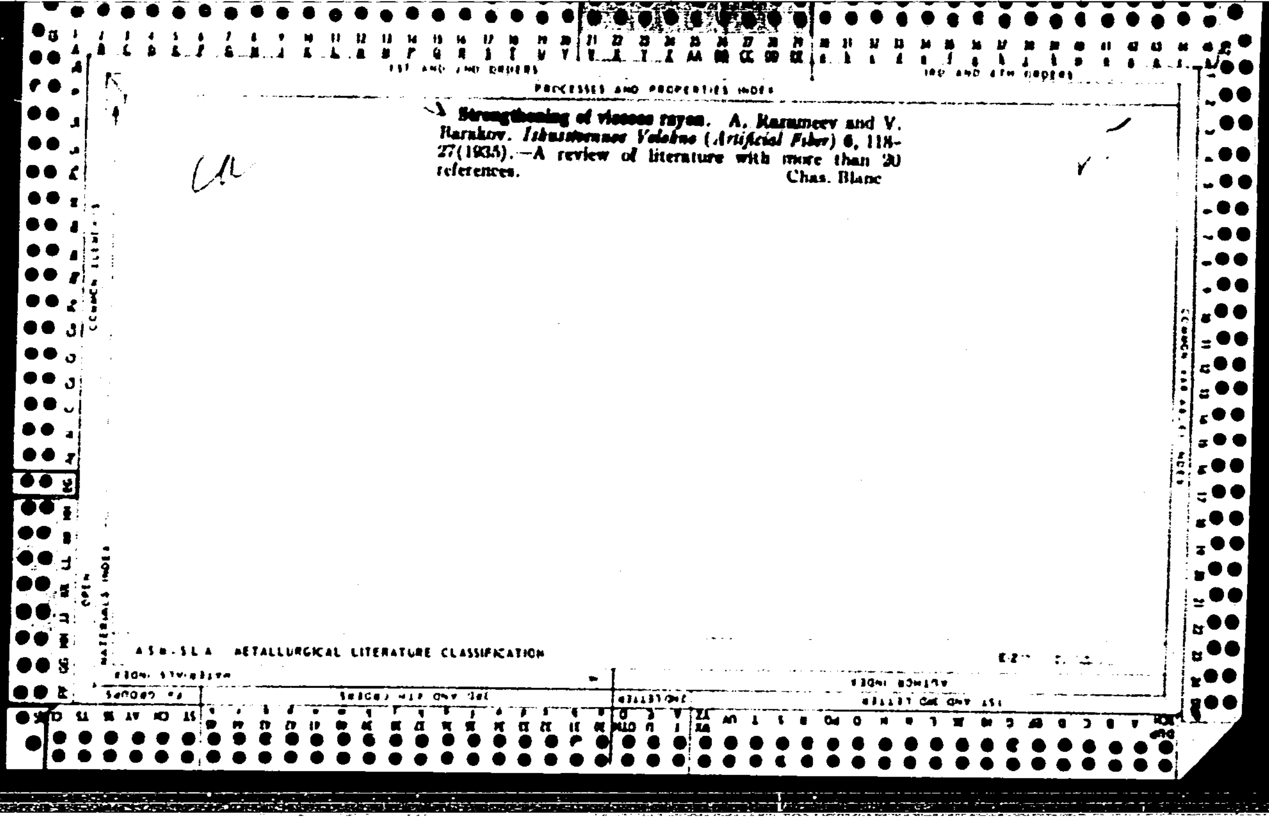
K[illegible]VA, [illegible]

ZEDINSKIY, G.M.; RAZUMEYENKO, T.V.

Manifestations of allergy in man induced by the injection of living plague vaccine; authors' abstract. Zhur.mikrobiol.epid. i immun. 28 no.7:136 Jl '57. (MIRA 10:10)
(PLAGUE--PREVENTIVE INOCULATION) (ALLERGY)



1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Strengthening of viscose rayon. A. Karameev and V. Barakov. *Iskusstvennoe Volokno* (*Artificial Fiber*) 6, 118-27(1935).—A review of literature with more than 20 references.
Chas. Blanc

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

8C

B-II-2

Creolin. A. [illegible] (Khim. Farm. Prom., 1934, No. 5, 21—[illegible].—Sulphonated castor oil (100 kg.) at 80—100° is treated with 51·2 kg. of aq. NaOH (*d* 1·332). Rosin (104 kg.) is then added, followed by 775 kg. of tar oils, and the whole mixed till homogeneous. H_2O is added to make 1000 kg.

Ch. Abs. (*p*)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

17

PROCESSES AND PROPERTIES INDEX

Creolin. A. Razumeev. *Khim. Farm. Prom.* 1934, No. 5, 21-2.—Treat the sulfonated castor oil (100 kg.) at 80–100° with 51.2 kg. of 36°Bé. NaOH, then add 104 kg. of rosin, mix until homogeneous, and add 775 kg. of tar oils (b. p. 200–320°). The total weight is adjusted with water to 1000 kg. L. Nasarevich

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Dispersion on cellulose during its conversion into rayon. A. Razumnev, B. Zaltsman and A. Zeldich. *Org. Chem. Ind.* (U. S. S. R.) 4, 12 (1937). The η of 1% solns. of cellulose is lowered to 30% of the original value during its conversion into viscose silk; the processes preceding xanthation are largely responsible for this effect. The content of mixed cotton-viscose silk fibers may roughly be derived from detn. of the η of their solns.

B. C. P. A.

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

B-II-5

Dispersion of cellulose during its conversion into artificial silk. A. Rasuvaev, B. Zaltsman, and A. [illegible] (Prom. Org. Chim., 1937, 4, 13—14).—The η of 1% solutions of cellulose is lowered to 30% of the original val. during its conversion into viscose silk; the processes preceding xanthation are largely responsible for this effect. The content of mixed cotton–viscose silk fibres may roughly be derived from determination of the η of their solutions.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Cr

25

Bisulfite compound of alizarin blue. A. A. Rasumeyev. Russ. appl. 49,462, June 19, 1929. A mixt. of alizarin blue paste or the dry dye with a soln. of alkali is supersatd. with sulfurous gas under agitation and let stand under ordinary or superatmospheric pressure at ordinary or elevated temp. until a sample is completely sol. in water. The product is then isolated by ordinary methods.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

C. J. WEST

The preparation of dimethyl sulfate. A. A. Razumeev. *J. Chem. Ind.* (Moscow) 1932, No. 12, 33.--Directions are given for the synthesis on a large scale. H. M. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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23

Increasing the content of α-cellulose in viscose. A. A. Razumeev.—*Tekh. Byull. GUIV* 1939, No. 4, 11-30; *Khim. Referat. Zhur.* **1940**, No. 8, 123.—Lab. expts. and plant tests for increasing the content of cellulose in viscose spinning solns. indicate that the concn. of cellulose can be increased to 8.5-9.0% without decreasing the strength of the rayon. Data for necessary changes in the tech. process in its individual stages are given. The viscose rayon thus obtained is equal to that obtained from viscose contg. 7.5% of cellulose. W. R. Henn.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

[illegible], [illegible], Cand Med Sci -- (diss) "The effects of narcotics with varying action on the bioelectrical reactions of certain sections of the brain," Leningrad, 1960, 15 pp (Leningrad Sanitary Hygiene Medical Institute).

(KL, 36-60, 118)

RAZUMEYEV, A. N.; LAZAREV, V. N. (Leningrad)

Vliyaniye narkotikov razlichnogo tipa deystviya na bioelektricheskiye reaktsii nekotorykh otdelov mozga

report submitted for the First Moscow Conference on Reticular Formation, Moscow, 22-26 March 1960.

RAKHMEYEV, A. M.; POPOV, V. M. (Leningrad)

Nekotoryye voprosy vagogeneza shoka.

report submitted for the First Moscow Conference on Reticular Formation, Moscow, 22-26 March 1960.

25250 S/177/60/000/007/005/011
D264/D304

27.1220

AUTHOR: Popov, V.I., Professor, Major General, Medical Corps, Razumeyev, A.N. and Ryazhkin, G.A.

TITLE: Changes in the functional state of certain sections of the cerebrum with shock in intact and irradiated animals

PERIODICAL: Voyenno-meditsinskiy zhurnal, no. 7, 1960, 32-35

TEXT: To determine the focus of inhibition and to check the effects of irradiation on sensitivity to pain, an electroencephalographic study was made of the functional state of the cerebral cortex and certain subcortical formations in intact and irradiated rabbits under shock. The test rabbits were exposed for 25 minutes to a radiation source with an intensity of 20 r/min, i.e. a total dose of 500 r. An analysis of the results is given, broken down into the latent period, height and recuperative period of radiation sickness. It was found that in both the intact and the irradiated animals the focus of inhibition in shock develops, not in the cor-

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25250 S/177/60/000/007/005/011
Changes in the functional state... D264/D304

tex, but in the underlying formations (vegetative nuclei of the hypothalamus, reticular formation of the cerebral corpus). Shock development in the irradiated animals had some peculiar features. In the latent period the animals were more resistant to pain stimuli combined with loss of blood. Response changes on the electroencephalograms of the cortex and subcortical formations are less marked than in the intact animals. At the height of sickness, however, shock develops more rapidly and the response changes are more marked than in the intact animals. During recuperation the state of shock is the same in both irradiated and healthy animals. P.K. Anokhin, A.I. Reshetov and A.V. Yakubenko are mentioned as having done recent research on this subject.

SUBMITTED: March, 1960

Card 2/2

RAZUMEYEV, A.N.

Effect of certain narcotics on the adoption of the rhythm of light stimuli by the cerebral cortex in rabbits. Fiziol.zhur. 46 no.1: 50-56 Ja '60. (MIRA 13:5)

1. From the department of pharmacology, pharmacy and pharmacognosy, S.M. Kirov Military Medical Academy, Leningrad.
(CEREBRAL CORTEX physiol.)
(ALCOHOL ETHYL pharmacol.)
(ANESTHETICS pharmacol.)
(LIGHT eff.)

VINOGRADOV, V.M., kand.med.nauk; D'YACHENKO, P.K., kand.med.nauk;
RAZUMEYEV, A.N., kand.med.nauk

Localization of the primary focus of inhibition in pain trauma and hemorrhage in connection with the problem of shock. Vest. khir. 85 no.11:58-69 N '60. (MIRA 14:2)

1. Iz kafedry farmakologii (zav. - doktor med.nauk T.A. Mel'nikova) Leningradskogo khimiko-farmatsevticheskogo instituta, kafedry obshchey khirurgii (nach. - prof. V.I. Popov) i kafedry farmakologii (zav. - prof. N.V. Lazarev) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(PAIN) (HEMORRHAGE) (SHOCK)

POPOV, V.I., prof., general-mayor meditsinskoy sluzhby; RAZUMEYEV, A.N.; RYAZHKIN, G.A., podpolkovnik meditsinskoy sluzhby; SLASTIKHIN, M.A., mayor meditsinskoy sluzhby

Some problems in the pathogenesis of traumatic and anaphylactic shock. Voen.-med. zhur. no.7:25-27 Jl '61. (MIRA 15:1)
(ALLERGY) (SHOCK) (BRAIN)

POPOV, V.I., professor; RAZUMEYEV, A.N.; RYAZHKIN, G.A.

Pathogenesis and treatment of shock. Vest.khir. 86 no.2:25-32 '61. (MIRA 14:2)

1. Iz kliniki obshchey khirurgii (nach. - prof. V.I. Popov) i kafedry farmakologii i farmatsii (zav. - prof. N.V. Lazarev) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova.

(SHOCK)

S/865/62/002/000/026/042
D405/D301

AUTHORS: Izosimov, G.V. and Razumeyev, A.N.

TITLE: Effect of prolonged transverse overloads of various magnitude on bioelectric response of cerebral cortex

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by. N. Sisakyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962, 247-253

TEXT: The study of the changes in the bioelectric activity of the cerebral cortex due to overloads is of practical importance as it would allow to determine the onset of functional disturbances due to acceleration, and to facilitate the search for means which would increase the resistance of the organism. The experiments were conducted on 50 rabbits weighing from 2-3 kg, subjected to accelerations of 2 to 14 g. The overloads lasted from 5 to 15 minutes. The electroencephalographic method was used. The rate of respiration and of cardial contraction was also recorded. Results: The changes in the bioelectric activity of the cerebral cortex occurred in three

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Effect of prolonged ...

phases. In the first phase the level of biopotentials decreased to 80-100 microvolt, and the number of slow synchronous oscillations (1-3 per second) decreased. In the second phase the level of bioelectric activity increased markedly, exceeding the original level; in contradistinction to the first phase, the number of slow oscillations increased. The third phase was characterized by an even greater increase in the slow waves, and also by a marked slowing down in the rate of respiration and cardial contraction. The bioelectric activity returned to normal 2-3 hours after the acceleration ceased. The following mechanism of the above phase changes is suggested: The lower activity in the first phase may be due to an increased flow of afferent impulses from extero and interoreceptors. The second phase may involve "initial inhibition" of the cerebral cortex. The third phase is apparently related to a further development of the inhibition process, leading to disturbances in the reflectory regulation of the cardial and respiration systems. At overloads of 12 g and above, the "initial inhibition" phase starts at the 123rd second from the beginning of the acceleration. With smaller overloads, this phase starts later. Conclusions: The changes in the

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D405/D301

Effect of prolonged ...

electroencephalograms occur in phases. The onset of the "initial inhibition" phase depends on the magnitude of the overload; this dependence is represented graphically by a hyperbole. The reticular formation of the cerebral stem plays an important part in the mechanism of phase changes. The introduction of Aminasine, which blocks the afferent impulses at the level of reticular formation, prevents or postpones the disturbances in the regular cardial and respiratory activity. There are 3 figures and 1 table.

Card 3/3

[illegible]

S/216/62/000/006/002/002
A004/A127

1140
[illegible]

AUTHORS: Gazenko, O.G., Limanskiy, Yu.P., Razumeyev, A.N., Izosimov, G.V., Baranov, V.I., Chichkin, V.A., Gaydamakin, N.A.

TITLE: Method of registering the action potentials of neurons of vestibular nuclei upon adequate stimulation of vestibular receptors in the cat

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya biologicheskaya, no. 6, 1962, 925 - 928

TEXT: The studies carried out were aimed at registering the action potentials of individual neurons of vestibular nuclei, particularly of the Deuters nucleus, during a motionless position of the animal and the reaction of these neurons on a stimulation of the vestibular apparatus during a vertical passive displacement of the animal. The tests were conducted on 17 cats on which action potentials of more than 500 neurons in the area of vestibular nuclei were registered. The authors describe the test conditions and the special test stand on which the animals were placed. The data obtained are being analyzed at present. Of the action potentials of 500 neurons registered, 6 groups of nerve cells were

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Method of registering the action potentials of S/216/62/000/006/002/002
A004/A127

separated, which were grouped according to the following symptoms: 1) Increase in the background rhythm in stimulating the receptors - 439 cells; 2) slowing down of the background rhythm - 20; 3) increase in the background rhythm when moving the platform downwards - 14; 4) increase in the background rhythm when moving the platform upwards - 7; 5) neurons detecting the restoration of the background rhythm after motion sickness - 70; 6) neurons not detecting the restoration of the background rhythm in the period after motion sickness - 397. 51 neurons did not show any response to the stimulation of receptors. There are 2 figures.

X

Card 2/2

IZOSIMOV, G.V.; RAZUMEYEV, A.N.

Studies on changes in the bioelectricall activity of the cerebral cortex under the influence of prolonged transverse overload. Izv. AN SSSR.Ser.biol.27 no.4:621-626 Jl-Ag '62. (MIRA 15:9)
(ACCELERATION--PHYSIOLOGICAL EFFECT) (ELECTROENCEPHALOGRAPHY)

RAZUMEYEV, A. N.; GAZENKO, O. G.; PARIN, V. V.;

"Responses of the Central Nervous System on the Action of Some Factors of the Space Flight".

Report submitted for the 12th European Congress of Aviation and Space Medicine, 1-5 Oct. 1963, Rome, Italy.

ACCESSION NR: AT4037701 S/2865/64/003/000/0306/0317

AUTHOR: Razumeyev, A. N.; Suvorov, P. M.

TITLE: Study of bioelectric activity of some sectors of the brain during acceleration stress

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy* kosmicheskoy biologii, v. 3, 1964, 306-317

TOPIC TAGS: acceleration, brain, bioelectricity, man, Alpha rhythm, electroencephalography

ABSTRACT: Two series of experiments have been performed to determine the effects of acceleration on the bioelectric activity of the brain. In the first series, 117 healthy adult human males were subjected to longitudinal (head-pelvis) accelerations ranging from 3.0 to 7.0 g for 30 sec and to transverse (back-chest) accelerations ranging from 7.0 to 12.0 g for 30 sec to 3 min. Analysis of the data indicated that the nature of changes in EEG as a result of longitudinal and transverse accelerations have much in common; the differences between the two are largely quantitative. Three distinct phases of acceleration effects appeared

ACCESSION NR: AT4037701

in the EEG. The first phase was characterized by a gradual increase of the beta rhythm. The alpha rhythm and the slow waves changed very little in comparison with the initial conditions. This type of change appears at 3 to 4 g in longitudinal accelerations and at 5 to 8 g in transverse accelerations. The second phase of changes in bioelectrical activity of the brain, characterized by an increase in the synchronization of the alpha rhythm, appears when longitudinal accelerations reach 5 to 7 g and when transverse accelerations reach 8 to 10 g. If accelerations are increased still further, the alpha rhythm weakens and gradually disappears altogether, being followed first by theta and later by delta waves. If the action of acceleration under these conditions is extended in time, the result is loss of consciousness accompanied by a complete absence of bioelectric activity. In order to clarify the mechanism of these phase changes, a second series of experiments was conducted on ten rabbits. In this case, electrodes were introduced into the reticular formation of the mid-brain, the hypothalamus, and the sensory motor region of the cortex. The rabbits were then subjected to transverse accelerations of 3, 5, and 7 g. Synchronization of bioelectrical activity was observed, appearing first in traces of biocurrents of the reticular formation, then of the hypothalamus, and finally in the brain cortex. When the animals were subjected to longer acceleration stress (7 g for 10 sec), bioelectric activity

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disappeared almost completely, first in the reticular formation, then in the hypothalamus, and finally in the brain cortex. After termination of acceleration, restoration of bioelectric activity was noted first in the brain cortex and finally in the reticular formation, that is, in reverse order.

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AUTHOR: Gazenko, O. G.; Yegorov, B. B.; Razumeyev, A. N.; Chekhonadskiy, N. A.

TITLE: Changes in neuron rhythm of the reticular formation during transverse accelerations

SOURCE: AN SSSR. Doklady*, v. 155, no. 5, 1964, 1233-1236

TOPIC TAGS: neuron, reticular formation, electroencephalography, neuron potential, physiological stress, centrifuge

ABSTRACT: The effect of overload on the higher brain centers has assumed importance in connection with space flights. Changes in the electroencephalogram upon accelerations may be caused by a number of factors: hypoxia, decreased circulation, increased influx of impulses over the efferent system, etc. Their influence on the reticular system, the integration center of efferent impulses, was studied in 7 cats, involving 100 neurons. The neuron potential was mea-

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sured with electrodes implanted in the neurons. The 3—5 G overload was created by means of a centrifuge provided with an alternating current amplifier, so that the signal reaching the centrifuge was of the order of 30 v. After termination of the experiment the brain was removed and the electrode location verified. Test conditions are described. Results showed that acceleration changed the activity of the various neurons by stages, the initial being a rhythmic repeat impulse, followed by grouped impulses and finally by complete impulse absence (quiet phase). The changes are apparently caused by the effect of the current impulses reaching the giant cell nucleus of the reticular formation over the afferent system. The influence of acceleration may be imagined as the summary result of 2 processes developing simultaneously in the neurons. The first process will lead to quantitative increase of impulses, the second to their decrease. However, development of the second process lags behind the first. At this stage hypoxia does not seem to play any role. The results are figured and formulas presented for calculating neuron activity during the various phases. Orig. art. has: 3 figures and 4 formulas.

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